

### **REMARKS/ARGUMENTS**

In amended Figure 2A, the centrifugal fan 205 has been amended to show its approximate profile in the clean bench 200.

Claims 1-6, 8-9, 12-16 and 40-44 remain in this application. Claims 7, 10-11, 17-39 have been canceled.

Applicant has thoroughly reviewed the outstanding Office Action including the Examiner's remarks and the references cited therein. The following remarks are believed to be fully responsive to the Office Action and, when coupled with the above amendments, are believed to render all claims at issue patentably distinguishable over the cited references.

Applicants respectfully requests reconsideration in light of the following remarks.

### **CLAIM REJECTIONS - 35 U.S.C SECTION 102 (b)**

With respect to page 2 of the Office Action, the Examiner rejected Claim 1 under 35 U.S.C. 102(b) as being anticipated by Miglino (Australian patent, Acceptance No. 653316).

Applicant respectfully traverses these rejections.

First, referring to Figures 1-2 and paragraphs 2-3, pages 7-8 in Miglino's specification, inside the fume cabinet 2, a pair of sinks 42 and 44 are arranged in the bottom of the working space for discharging spent sterilizing fluid by a drainage outlet 46 and a drainpipe 48. Hence, the drainage outlet 46, a single outlet arranged below the sinks 42 and 44, is only utilized for discharge spent sterilizing fluid, it will not arranged to be connected with a motor or fan to discharge particles. But referring to Figure 2A of the present application, in the bottom of the clean bench 200 is provided with a particle-conducting basin 213, which is formed by four side walls and a bottom partition

215 with plural outlets. And a fan-filter unit 203 and a centrifugal fan 205 are arranged under the bottom partition 215. Hence, the airflow produced by the centrifugal fan 205 for directing the particles will pass through the particle-conducting basin 213 and go into the fan-filter unit 203 freely.

Therefore, the bottom structure of the particle-conducting basin 213 in the present application is very different from the sinks 42 and 44 of Miglino's invention. The particle-conducting basin 213 is arranged for conducting particles, and below the particle-conducting basin 213, the bottom partition 215 is provided with plural outlets to make the particle freely passing through. But the sinks 42 and 44 of Miglino's fume cabinet 2 are only arranged for providing a sterilizing operation, and below the sinks 42 and 44, the drainage outlet 46 is the only outlet and is utilized only for discharging spent sterilizing fluid.

#### **CLAIM REJECTIONS- 35 USC § 103(a)**

With respect to pages 2 through 3 of the Office Action, the Examiner rejected Claims 2-6 under 35 U.S.C. 103 (a) as being unpatentable over Miglino (Australian patent, Acceptance No. 653316) in view of Wonsetler (U.S. Patent, Patent No. 5,511,764).

Applicant respectfully traverses these rejections.

First, a self-exhausting welding station 2 is disclosed in Wonsetler's invention, wherein a squirrel cage blower 70 and a filter means 30 are arranged under the working area for exhausting and filtering the fumes, airborne particulate matter and sparks, which are produced in a welding operation.

Second, claims 2-6 of the application claim the various options of fan and filter in the clean bench. A centrifugal fan could be selected as the fan in the clean bench, and a

HEPA filter or a ULPA filter could be selected as the filter below the fan. In addition, a HEPA pre-filter or a ULPA pre-filter could be arranged in the clean bench above the fan.

Therefore, Wonsetler's invention fails to disclose the filters such as HEPA filter, ULPA filter, HEPA pre-filter and a ULPA pre-filter. It is because the above-mentioned filters are suitable to be applied within a clean-room environment; and the coarse filter is sufficient to be the filter in the self-exhausting welding station 2, utilized for the general welding operations in an indoor environment. In addition, in both Miglino's fume cabinet and Wonsetler's self-exhausting welding station, the arrangements for draining fume are not along a straight line as the present application. The complicated structures of the fume cabinet and the self-exhausting welding station will increase the opportunity for particles being collected in the dead spaces. It is therefore believed that they are unsuitable to be used in the clean room.

Hence, combining the fume cabinet of Miglino's invention with the squirrel cage blower and coarse filter of Wonsetler's invention will not teach and suggest the features of claims 2-6 of the application.

With respect to page 3 of the Office Action, the Examiner rejected Claims 7-9 under 35 U.S.C. 103 (a) as being unpatentable over Miglino (Australian patent, Acceptance No. 653316) in view of Wilk (U.S. Patent, Patent No. 6,332,837).

Applicant respectfully traverses these rejections.

First, Claim 7 has been canceled. Therefore, according to above amendment, the rejection about Claim 7 can be withdrawn.

Second, Claim 8 of the present application claims that the four side walls of the particle-conducting basin have a slope profile. The sloping design will make a better conduction of the airflow and lower the opportunity for particles being collected in the dead spaces of the particle-conducting basin. Hence, the particle-conducting basin of the

present application is aimed for providing a simple and smooth conducting of the airflow and shortening of the traveling path of the particles. In contrast, the device of Wilk's invention is aimed for "extending the traveling path" of the spark particles to reduce their speed and energy. In addition to the pyramid 20, other elements such as the pyramid 21 and the saucer-shape portion 22 are "essential" and "necessary." Hence, the complicated design of Wilk's device will increase the opportunity for particles being collected in the dead spaces and be unsuitable for use in the clean room. Skilled persons in the art might not be willing to combine the fume cabinet of Miglino's invention with the exhaust device of Wilk's invention to obtain the features of Claim 8 of the present application. This is because if the two sinks are replaced with the exhaust device, the structure of the fume cabinet will become more complicated and result in increasing the opportunity for particles being collected in the dead spaces. In addition, if the vent arrangement is replaced with the exhaust device, it seems to be helpless for the exhaust work of the fume cabinet.

In addition, Claim 9 of the present application claims that the four side walls of the particle-conducting basin have a sticky surface toward the working space. Referring to lines 10-12, page 7 of the present application. The sticky surface of the four side walls is formed by sticking the twin adhesive, and the particles produced in the process of the clean work will easily become stuck on the surface of the four side walls. But what makes the inside surfaces of the fume cabinet of Miglino's invention sticky is fluid, e.g. the spent sterilizing fluid. Therefore, the "sticky" surface of the four side walls of the present application is really different from the "stick" surface of the fume cabinet of Miglino's invention, and the sticky inside surface of the fume cabinet will "dry up" and disappear with time.

With respect to pages 3 through 5 of the Office Action, the Examiner rejected Claims 12-13, 15-16, 40-42, and 43-44 under 35 U.S.C. 103 (a) as being unpatentable over Miglino (Australian patent, Acceptance No. 653316) in view of Gayring (U.S. Patent, Patent No. 2,400,639).

Applicant respectfully traverses these rejections.

First, the bottom structure of the particle-conducting basin in the present application is very different from the sinks of Miglino's invention. The particle-conducting basin is arranged for conducting particles, and below the particle-conducting basin, the bottom partition is provided with plural outlets to make the particle freely passing through. But the sinks of Miglino's fume cabinet are only arranged for providing a sterilizing operation and discharging spent sterilizing fluid through drainage outlet.

Second, the half-cylindrical adjustable canopy of the present invention is the combination of a front quarter-cylindrical movable canopy and a back quarter-cylindrical fixed canopy. But referring to Figure 2 in Gayring's specification, the hood-shaped shield 10 is an "eighth-cylindrical" movable canopy, and the upper portion of hood 9 is provided with an "eighth-cylindrical" profile. Hence, combining the fume cabinet of Miglino's invention with the hood and the hood-shaped shield of Gayring's invention will not teach and get the features of claims 12-13, 15-16, 40-42, and 43-44 of the present application.

With respect to page 4 of the Office Action, the Examiner rejected Claim 14 under 35 U.S.C. 103 (a) as being unpatentable over Miglino (Australian patent, Acceptance No. 653316) in view of Kleppen (U.S. Patent, Patent No. 5,685,771).

Applicant respectfully traverses these rejections.

First, the bottom structure of the particle-conducting basin in the present application is very different from the sinks of Miglino's invention. The particle-conducting basin is

arranged for conducting particles, and below the particle-conducting basin, the bottom partition is provided with plural outlets to make the particle freely passing through. But the sinks of Miglino's fume cabinet are only arranged for providing a sterilizing operation and discharging spent sterilizing fluid through drainage outlet.

Second, the glove port provided by the present application is a hold indented from the bottom edge of the front quarter-cylindrical movable canopy. Hence, whether the front quarter-cylindrical movable canopy is sealed or opened, the technician will continue processing the clean work. But referring to Figure 1 in Kleppen's specification, the glove 14 is not a hold, it is really a glove inserted through the sidewall of the enclosure 2. Hence, the glove of Kleppen's invention is really different from the glove port of the present application, and combining the fume cabinet of Miglino's invention with the glove of Kleppen's invention will not result in the features of claim 14 of the present application.

Therefore, according to above amendment, the rejections can be withdrawn and a reconsideration of Claims 1-6, 8-9, 12-16 and 40-44 is respectfully submitted.

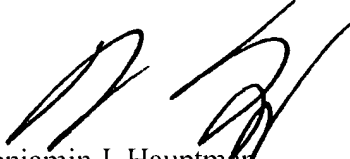
### **Conclusion**

In light of the above amendments and remarks, applicants respectfully submit that pending claims 1-6, 8-9, 12-16, and 40-44 as currently presented are in condition for allowance and hereby respectfully request reconsideration. Especially, the claims have been amended to overcome the rejections set forth in this Office Action, so as to correspond with the examiner's requirements that would be allowable. Having thus overcome each of the rejections made in this Office Action, withdrawal of the rejections and expedited passage of the application to issue is requested.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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**Amendment to the Drawings:**

The attached sheet of drawings includes changes to Fig. 2A. This sheet, which includes Fig. 1 and Fig. 2A, replaces the original sheet including Fig. 1 and Fig. 2A. In Fig. 2A, the centrifugal fan 205 has been amended to show its approximate profile in the clean bench 200.

Attachment: Replacement Sheet

Annotated Sheet Showing Changes

CLEAN BENCH  
Application No. 10/621,391  
Inventor: CHANG, Ta-Kuang et al.  
*Annotated Sheet Showing Changes*

### *Annotated Sheet Showing Changes*

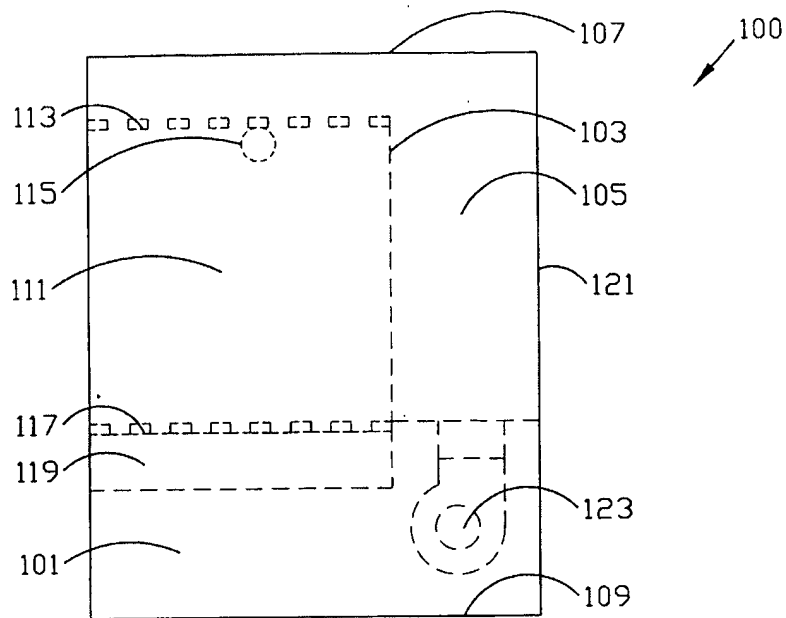


FIG.1(Prior Art)

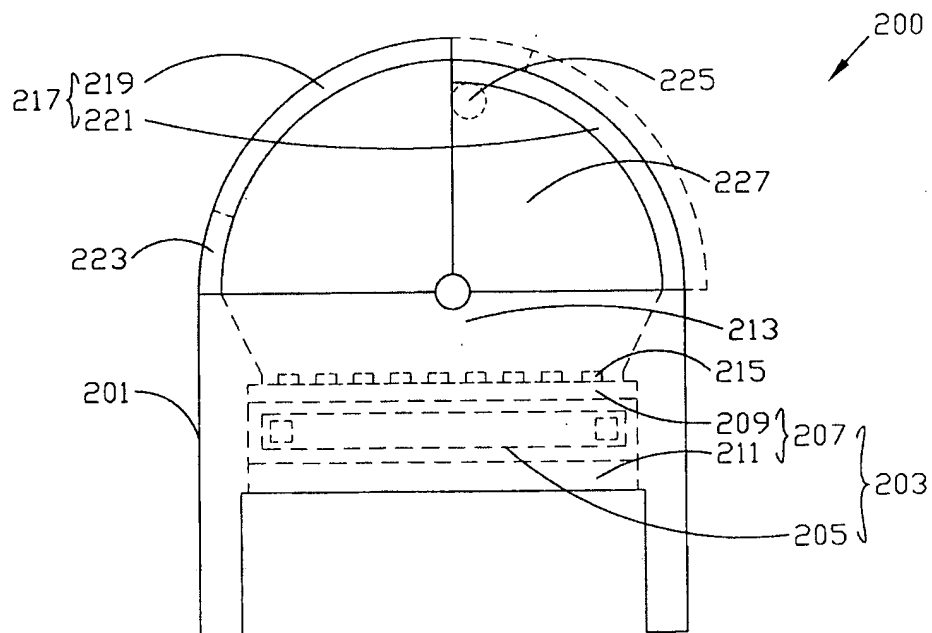


FIG.2A